Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the matter of	)	
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IN RE: DELETE, DELETE, DELETE	)	GN Docket No. 25-133
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COMMENTS OF PARAMIUM TECHNOLOGIES

1. Introduction and Summary.

Paramium Technologies submits these comments in response to the Federal Communications Commission's (the "Commission" or the "FCC") above referenced Public Notice with respect to identifying FCC rules for the purpose of alleviating unnecessary regulatory burdens.

The current regulatory framework was largely developed in the 1990s and no longer reflects the realities of the modern satellite industry. The existing framework has inadvertently stifled U.S. competitiveness by imposing unnecessary barriers that have driven business abroad. An efficient regulatory framework will incentivize space station operators to register their satellites in the United States, and earth station operators to install cutting edge ground communication infrastructure in the United States, reinforcing the country's leadership in space communications.

Updating regulations for American companies that provide satellite earth station services is critical to maintaining the United States' leadership in the space industry. **We urge the Commission to consider deleting sections 47 CFR 25.115(b) and 47 CFR 25.137. This will allow American companies to export services competitively.**

2. Marketplace and Technological Changes

Title 47, Chapter I, Subchapter B, Part 25 of the FCC regulations was crafted to regulate earth station and space station operations within the predominant business model used in the last century. The conventional model assumed space station operators were distributing data via satellite and that earth station operators would buy data from space station operators. While there are still some markets that operate under this model, the industry has shifted towards a model where space station operators collect data in space, downlink that data to earth via earth station antennas, and then distribute and sell the data via the internet backbone. The ubiquity of optical fiber internet connectivity means that earth stations do not need to be located where the data will be used. Instead, earth stations are a means of bringing space data to the internet.

Another shift in the satellite communication industry is that space station operators increasingly seek to share ground infrastructure with others to lower their capital costs and to optimize the use of ground infrastructure. This has created a new market for earth stations as a service or Ground Segment as a Service (GSaaS). Multiple companies have begun to provide earth stations as a service, which has in turn generated new technological developments.

Historically, space stations each had a dedicated earth station, or each constellation of similar space stations had its own corresponding earth stations. With the exponentially growing demand for earth stations as a service, earth station antennas have been designed to operate at multiple bands and to communicate with diverse space stations. The new antenna designs include technology to optimize switching between multiple space stations in diverse orbits. There is also

an ever-growing demand for continuous connectivity between space stations and ground networks, leading to growing networks of earth stations around the world. While in the past, earth-space communication was done through dedicated one-to-one connections, market developments and technological advancements demand agile, many-to-many networks where multiple space stations communicate with multiple earth stations. This fundamental shift of business models needs a new regulatory framework that accommodates modern industry practices.

3. Current Regulations Depleting U.S. Competitiveness

The current FCC regulations were intended to protect American market share. Unfortunately, they have largely had the opposite effect. Due to excessively burdensome permitting requirements for registering a space station (satellite) in the United States, many satellite operators register their space stations in other countries. This comment does not address the current burdensome FCC licensing regulations for space stations, however, we parenthetically note that it is well known in the satellite industry that the United States has the most restrictive permitting process and we recommend that the FCC review and revise sections 47 CFR 25.114 and bring them into parity with the licensing requirements of countries such as the United Kingdom or Norway to promote American competitiveness.

When the United States began losing market share in the satellite industry, the FCC decided to revise its regulations, but rather than easing regulations for space stations to promote American competitiveness, the FCC imposed additional regulations on American earth station operators (notably 47 CFR 25.137(b-g)) stipulating that American earth stations can only communicate with space stations that have substantially complied with American FCC licensing requirements. As a

result, most companies who offer earth stations as a service, locate their headquarters and most of their earth stations outside the United States of America. Rather than protecting and promoting American industry, these regulations have hamstrung American companies and driven the technology, infrastructure, and profits to other countries. The regulations produced the opposite effect of the benefits the Commission originally predicted they would. As a result, U.S. businesses face significant obstacles when trying to compete on the global stage, while foreign space industries continue to grow and thrive due to more accommodating regulatory environments.

4. Current Regulations Based on Historic Market Structures

Another challenge for earth stations is that the regulations are based on the broadcast business model where space station operators are providers, and earth station operators are customers. For example 47 CFR 25.137 uses language like: "An entity requesting access to the United States market through a non-U.S.-licensed space station" and "A non-U.S.-licensed NGSO-like satellite system seeking to serve the United States". Currently the FCC applies these regulations to American companies who are selling earth stations as a service. In an attempt to control the import of foreign products (data), the Commission is actually limiting the export of American services. Earth stations that are owned by American companies and that are selling services should not be subject to protectionist regulations that apply to foreign-controlled earth stations and earth stations that are purchasing data products from foreign space station sources.

5. Barriers to Entry for Entrepreneurs and Other Small Business

The current regulations that require earth station operators to receive a license to communicate with specific space stations that have not been licensed or otherwise approved by the

FCC pose a barrier to competitive entry into the communications marketplace particularly for entrepreneurs and other small businesses. Repetitive filing requirements are impractical for small businesses with limited human resources. By impeding entrepreneurs, the industry stifles innovations that could advance American capabilities. Specifically, itemized permitting processes prohibit efficient service models like automated and self-serve earth station platforms.

6. Cost to the Commission

The current regulatory framework is also burdensome to the Commission and therefore to American taxpayers. Imagine if you needed to apply for a license each time you wanted to send and receive email with a new foreign client! As the internet expands into space, the number of licenses required under the current broadcast-era system is growing exponentially. If the rules are not revised, the Commission will need to hire exponentially more staff just to maintain the already long lead time for licensing.

7. Recommended Regulatory Revisions

To address these challenges and ensure that U.S. satellite businesses remain globally competitive, we propose updating 47 CFR §25 to adopt a more flexible and forward-looking approach. Specifically, earth stations that are owned by Americans or American-owned companies that are providing communication services should be regulated separately from foreign-owned earth stations and from earth stations that are used to purchase products from foreign sources. We recommend that American-owned earth stations that provide communication services be governed by the following regulations:

The Commission should delete Section 25.115(b) of its rules to clarify that earth stations that are used only for receiving signals do not require FCC licensing. These receive-only earth stations are operated according to standards typical for other means of electronic communication such as receiving video programming or earth imaging data.

Each earth station that is used for transmitting signals requires an FCC license. This license prescribes the frequencies, power levels, and pointing angles that the antenna may use (according to current regulation sections such as 47 CFR §25 Subpart C). The Commission, however, should delete Section 25.137 of its rules so that its regulations no longer prescribe or limit which space stations the earth station can communicate with and provide services to. Earth station operators should not be required to identify points of communication as part of licensing, but should be regulated as other means of private electronic communication such as email and amateur radio.

American earth stations that provide communication services should not require additional license or permission from the FCC to communicate (both transmit and receive) with any space station that has been filed with the International Telecommunication Union (ITU) and is registered in a country that is a member of the World Trade Organization (WTO) except as required by international agreements or treaties as in 47 CFR 25.115(a)(8).

The following regulations should not apply to American earth stations that provide communication with space stations as a service: 47 CFR 25.115(b)(9) and 47 CFR 25.137. Also, FCC Form 312 should be updated to eliminate questions 22, 42a, 42b, B2, and B3.

These recommended deregulatory initiatives will modernize satellite earth station regulations to alleviate unnecessary regulatory burdens and to facilitate and encourage American firms' investment in modernizing their networks, developing infrastructure, and offering innovative and advanced capabilities.

8. Conclusion

The current FCC regulations governing earth stations and space stations were crafted for a market that no longer reflects the realities of the modern satellite industry. The existing framework has inadvertently stifled U.S. competitiveness by imposing unnecessary barriers that have driven business abroad. An efficient regulatory framework will incentivize space station operators to register their satellites in the United States, and earth station operators to install cutting edge ground communication infrastructure in the United States, reinforcing the country's leadership in space communications and ensuring independent self-reliance.

Updating regulations for American companies that provide earth station services is critical to maintaining the United States' leadership in the space industry. We urge the Commission to consider these recommendations and take proactive steps to support the evolving needs of the American space and satellite industry.

Respectfully Submitted,

/s/ Justin J. Hyatt
Chief Executive Officer
Paramium Technologies Inc.
9040 S. Rita Rd Suite 1270
Tucson, AZ 85747